Claims

What is claimed is:

1. A method comprising steps of:

detecting a first peak of a position error signal of a write head;

detecting a second peak of the position error signal of the write head, the second peak following the first peak and being of opposite sign with respect to the first peak; and

comparing a distance between the first and second peaks with a distance threshold.

2. The method of claim 1, further comprising:

comparing a time duration between the first and second peaks with a time threshold.

3. The method of claim 2, further comprising:

if the duration between the first and second peaks is greater than the time threshold and if the distance between the first and second peaks is greater than the distance threshold, resetting a settling algorithm.

4. The method of claim 1, further comprising:

if the distance between the first and second peaks is greater than the distance threshold, resetting a settling algorithm.

5. The method of claim 4, wherein the step of resetting the settling algorithm comprises resetting a counter of the settling algorithm.

6. The method of claim 1, wherein a low pass filter filters out high frequency oscillations from the position error signal.

7. A method for controlling operations of a storage device, the method comprising steps of:

detecting a position error signal of a head of the storage device, the position error signal having at least two consecutive peaks of opposite sign;

comparing a distance between the two consecutive peaks to a distance threshold;

delaying a write operation if the distance between the two consecutive peaks is greater than the distance threshold.

8. The method of claim 7, wherein the write operation is only delayed if a duration between the two consecutive peaks is greater than a time threshold.

9. The method of claim 7, wherein the write operation is delayed by resetting a settling counter of a settling algorithm.

10. The method of claim 7, further comprising a filter which filters high frequency oscillations out of the position error signal.

11. A storage system, comprising:

a storage medium having locations;

a head capable of writing to the storage medium; and

a position detection system for producing a position error signal of the head relative to the locations of the storage medium;

wherein if the position error signal includes two peaks outside a position error threshold, a write operation is halted.

12. The system of claim 11, wherein the two peaks are consecutive opposite sign peaks.

13. The system of claim 11, wherein the write operation is halted by resetting a counter of a settling algorithm.

14. The system of claim 11, further comprising a low pass filter that filters out high frequencies of the position error signal.

15. The system of claim 11, wherein the write operation is only halted if the two peaks are consecutive peaks of opposite sign and if the two peaks occur with at least a predetermined amount of time between them.

16. A method of comprising the steps of:

detecting a position error signal of a head in a magnetic storage system relative to tracks of the magnetic storage system;

resetting a settling algorithm if the position error signal detects mechanical oscillations of the head outside a predetermined position error signal threshold.

17. The method of claim 16, wherein the step of resetting the settling algorithm comprises resetting a counter of the settling algorithm.

18. The method of claim 16, wherein the settling algorithm is reset only if the head moves outside the predetermined position error signal threshold with a frequency above a predetermined frequency.

19. The method of claim 16, further comprising a low pass filter that filters frequencies above 1600 Hz from the position error signal.